

IN THE CLAIMS:

Please amend Claims 1-3, 6, 7, 10-13, 17, 18, 20 and 21 as follows. Note that all the claims currently pending in this application, including those not presently amended, have been reproduced below for the Examiner's convenience.

1. (Currently Amended) A bearing assembly comprising:
  - a guide having a top side provided with a guide surface comprising a magnetic body;
  - a moving body which moves along the guide surface;
  - a first movable guide which moves along the guide surface and moves said moving body in a first direction;
  - a second movable guide which moves along the guide surface and moves said moving body in a second direction which is orthogonal to the first direction;
  - a bearing provided on a portion of said first and second movable guides that opposes the guide surface; and
  - a magnet, which has an opposing surface that opposes the guide surface, provided on said first and second movable ~~guide~~ guides for the purpose of applying a magnetic attractive force between said first and second movable guides and the guide surface;
  - wherein the guide surface has edges to define a size of the guide surface in a width direction which is orthogonal to a traveling direction of each of said first and second movable guides so as to ~~a relationship of the size and/or placement of the guide surface and the opposing surface of said magnet is defined for the purpose of limiting~~ limit displacement of said first and second movable guides in ~~[[a]]~~ the width direction, ~~which is orthogonal to a travelling~~

~~direction of each of said first and second movable guides, to an allowable range, using a magnetic attractive force of said magnet in the width a direction parallel to the guide surface produced in accordance with an amount of deviation of the opposing surface of said magnet from the guide surface owing to displacement, which can occur when each of said first and second movable guides moves in the width direction.~~

2. (Currently Amended) ~~The assembly according to Claim 1; A bearing assembly comprising:~~

a guide having a top side provided with a guide surface comprising a magnetic body;

a moving body which moves along the guide surface;

a first movable guide which moves along the guide surface and moves said moving body in a first direction;

a second movable guide which moves along the guide surface and moves said moving body in a second direction which is orthogonal to the first direction;

a bearing provided on a portion of said first and second movable guides that opposes the guide surface; and

a magnet, which has an opposing surface that opposes the guide surface, provided on said first and second movable guides for the purpose of applying a magnetic attractive force between said first and second movable guides and the guide surface;

wherein a relationship of the size and/or placement of the guide surface and the opposing surface of said magnet is defined for the purpose of limiting displacement of said first and second movable guides in a width direction, which is orthogonal to a travelling

direction of each of said first and second movable guides, to an allowable range, using a magnetic attractive force in the width direction produced in accordance with an amount of deviation of the opposing surface of said magnet from the guide surface owing to displacement, which can occur when each of said first and second movable guides moves in the width direction, and

wherein size of the guide surface in the width direction is defined by a groove, which extends along the ~~travelling~~ traveling direction, provided in the top side of said guide, and a terminus, which extends along the ~~travelling~~ traveling direction, of the top side of said guide.

3. (Currently Amended) ~~The assembly according to claim 1;~~ A bearing assembly comprising:

a guide having a top side provided with a guide surface comprising a magnetic body;

a moving body which moves along the guide surface;

a first movable guide which moves along the guide surface and moves said moving body in a first direction;

a second movable guide which moves along the guide surface and moves said moving body in a second direction which is orthogonal to the first direction;

a bearing provided on a portion of said first and second movable guides that opposes the guide surface; and

a magnet, which has an opposing surface that opposes the guide surface, provided on said first and second movable guides for the purpose of applying a magnetic attractive force between said first and second movable guides and the guide surface;

wherein a relationship of the size and/or placement of the guide surface and the opposing surface of said magnet is defined for the purpose of limiting displacement of said first and second movable guides in a width direction, which is orthogonal to a traveling direction of each of said first and second movable guides, to an allowable range, using a magnetic attractive force in the width direction produced in accordance with an amount of deviation of the opposing surface of said magnet from the guide surface owing to displacement, which can occur when each of said first and second movable guides moves in the width direction, and

wherein the top side of said guide is provided with a protrusion, which extends along the ~~travelling~~ traveling direction, so as to oppose said magnet, and said guide surface is formed by the top side of said protrusion opposing said magnet.

4. (Original) The assembly according to claim 2, wherein the size of the guide surface in the width direction is the same as or smaller than the size of the opposing surface of said magnet in the width direction.

5. (Original) The assembly according to claim 3, wherein the size of the guide surface in the width direction is the same as or smaller than the size of the opposing surface of said magnet in the width direction.

6. (Currently Amended) The assembly according to claim 1, wherein said magnet is provided on said first and second movable guides at a plurality of locations spaced apart along the ~~travelling~~ traveling direction of said moving body.

7. (Currently Amended) The assembly according to claim 1, wherein, with respect to at least said first movable guide, the guide surface extends along the ~~travelling~~ traveling direction on both sides of said guide, each of the guide surfaces, and each of the opposing surfaces is provided with said magnet;

an outer end portion of the opposing surface of each magnet and an outer end portion of the guide surface being in agreement, or the outer end portion of the opposing surface of each magnet projecting beyond the outer end portion of the guide surface by a prescribed amount.

8. (Original) The assembly according to claim 2, wherein the size of the guide surface in the width direction is the same as or greater than the size of the opposing surface of said magnet in the width direction.

9. (Original) The assembly according to claim 3, wherein the size of the guide surface in the width direction is the same as or greater than the size of the opposing surface of said magnet in the width direction.

10. (Currently Amended) The assembly according to claim 1, wherein an end portion of the guide surface along the ~~travelling~~ traveling direction is defined by an end portion of the guide surface.

11. (Currently Amended) The assembly according to claim 2, wherein an end portion of the guide surface along the ~~travelling~~ traveling direction is defined by a groove that extends in a direction orthogonal to the ~~travelling~~ traveling direction.

12. (Currently Amended) The assembly according to claim 3, wherein an end portion of the guide surface along the ~~travelling~~ traveling direction is defined by an end portion, which extends along the ~~travelling~~ traveling direction, of the top side of said protrusion.

13. (Currently Amended) The assembly according to claim 1, wherein, with respect to at least said first movable guide, the guide surface extends along the ~~travelling~~ traveling direction on both sides of said guide, said first movable guide has an opposing surface on both ends thereof that opposes each of the guide surfaces, and each of the opposing surfaces is provided with said magnet;

one end portion of said first movable guide being provided with a hydrostatic bearing opposing a side face of said guide orthogonal to said guide surface.

14. (Original) A table device having the bearing assembly set forth in claim 1.

15. (Original) An exposure apparatus comprising:  
exposure means for projecting part of a pattern on a master plate onto a substrate via an exposure optical system, and exposing the substrate to a prescribed exposure area of the pattern on the master plate; and

a table device having the bearing assembly, which is set forth in claim 1,  
for moving the master plate and/or substrate for exposure.

16. (Original) A semiconductor manufacturing method that uses the  
exposure apparatus set forth in claim 15.

17. (Currently Amended) A stage apparatus comprising:  
a guide provided with a surface comprising a magnetic body;  
a moving body movable along the surface in a first direction and a  
second direction;  
a first movable guide which moves in the second direction, moves said  
moving body in the second direction and guides said moving body in the first direction;  
a second movable guide which moves in the first direction, and moves  
said moving body in the first direction and guides said moving body in the second direction; and  
magnets placed in said first and second movable guides, which produce  
magnetic attractive forces with the magnetic body,  
wherein the surface of said guide has edges to define its size in a width  
direction which is orthogonal to a traveling direction of each of said first and second moving  
guides the magnetic body and said magnets are provided so that movement of said first movable  
guide in the ~~second~~ first direction is limited by the magnetic attractive force and movement of said  
second movable guide in the ~~first~~ second direction is limited by the magnetic attractive force using  
a magnetic attractive force of said magnets in a direction parallel to the surface.

18. (Currently Amended) ~~The apparatus according to claim 17, A stage~~  
apparatus comprising:  
a guide provided with a surface comprising a magnetic body;  
a moving body movable along the surface in a first direction and a  
second direction;  
a first movable guide which moves in the second direction, moves said  
moving body in the second direction and guides said moving body in the first direction;  
a second movable guide which moves in the first direction, and moves  
said moving body in the first direction and guides said moving body in the second direction; and  
magnets placed in said first and second movable guides, which produce  
magnetic attractive forces with the magnetic body,  
wherein the magnetic body and said magnets are provided so that  
movement of said first movable guide in the second direction is limited by the magnetic attractive  
force and movement of said second movable guide in the first direction is limited by the magnetic  
attractive force,  
  
wherein said guide has a first groove extending along the first direction  
and a second groove extending along the second direction on the surface, and  
  
wherein the movement of said first guide is limited by the first groove  
and the movement of said second guide is limited by the second groove.

19. (Previously Presented) The apparatus according to claim 17, wherein  
said first and second movable guides are supported by said guide via a gas bearing, and



wherein said magnet is utilized for applying prepressure to the gas bearing.

20. (Currently Amended) A stage apparatus comprising:

a guide provided with a surface comprising a magnetic body;

a moving body movable along the surface;

a gas bearing for supporting said moving body with respect to the surface; and

a magnet which is supplied to said moving body and produces a magnetic attractive force with said magnetic body,

wherein the surface of said guide has edges to define its size in a width direction which is orthogonal to a traveling direction of said moving body ~~said magnet is supplied~~ to limit movement of said moving body in ~~a direction orthogonal to its travelling~~ the width direction, using a magnetic attractive force of said magnet in a direction parallel to the surface, and apply prepressure to said gas bearing.

21. (Currently Amended) A stage apparatus comprising:

~~a stage base;~~

a guide;

a moving body movable along a surface ~~of said stage base~~ of said guide in X and Y directions; and

a magnet which is supplied to said moving body and produces a magnetic attractive force,

wherein the surface of said guide has edges to define its size in the X and Y directions ~~said magnetic body and said magnet are placed~~ to limit movement of said moving body so that said moving body does not go beyond predetermined strokes in the X and Y directions.

22. (Previously Presented) The apparatus according to claim 21, further comprising a gas bearing for supporting said moving body with respect to said stage base.

23. (Previously Presented) The apparatus according to claim 22, wherein said magnet is also utilized to apply prepressure to said gas bearing.

24. (Previously Presented) An exposure apparatus comprising:  
exposure means for projecting part of a pattern on a master plate onto a substrate via an exposure optical system, and exposing the substrate to a prescribed exposure area of the pattern on the master plate; and  
a stage apparatus, which is set forth in claim 17, for moving the master plate and/or substrate for exposure.

25. (Previously Presented) An exposure apparatus comprising:  
exposure means for projecting part of a pattern on a master plate onto a substrate via an exposure optical system, and exposing the substrate to a prescribed exposure area of the pattern on the master plate; and

a stage apparatus, which is set forth in claim 20, for moving the master plate and/or substrate for exposure.

26. (Previously Presented) An exposure apparatus comprising:

exposure means for projecting part of a pattern on a master plate onto a substrate via an exposure optical system, and exposing the substrate to a prescribed exposure area of the pattern on the master plate; and

a stage apparatus, which is set forth in claim 21, for moving the master plate and/or substrate for exposure.